



35W4

HALF-WAVE VACUUM RECTIFIER

MINIATURE TYPE

GENERAL DATA

Electrical:

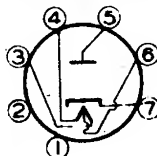
	Without Panel Lamp	With No. 40 or No. 47 Panel Lamp	
Heater, for Unipotential Cathode:			
Voltage (AC or DC):			
Entire Heater (pins 3 & 4) . . .	35	32 . .	volts
Panel-Lamp Section (pins 4 & 6) . .	7.5	5.5 . .	volts
Current { between pins 3 & 4 . . .	0.15	- . .	amp
{ between pins 3 & 6 . . .	-	0.15 . .	amp

Mechanical:

Mounting Position	Any
Maximum Overall Length	2-5/8"
Maximum Seated Length	2-3/8"
Length from Base Seat to Bulb Top (Excluding tip)	2" ± 3/32"
Maximum Diameter	3/4"
Bulb	T-5-1/2
Base	Small-Button Miniature 7-Pin 58Q

Basing Designation for BOTTOM VIEW

- Pin 1—No Connection
Pin 2—No Connection
Pin 3—Heater
Pin 4—Heater
Pin 5—Plate



- Pin 6—Heater Tap
Pin 7—Cathode
Panel-Lamp Heater
Section is between pins 4 & 6

HALF-WAVE RECTIFIER

Maximum Ratings, Design-Center Values:

PEAK INVERSE PLATE VOLTAGE	330 max.	volts
PEAK PLATE CURRENT	600 max.	ma
DC OUTPUT CURRENT:		
With Panel Lamp & { No Shunting Resistor.	60 max.	ma
{ Shunting Resistor . .	90 max.	ma
Without Panel Lamp	100 max.	ma
PANEL-LAMP-SECTION VOLTAGE (RMS):		
When panel lamp fails.	15 max.	volts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	330 max.	volts
Heater positive with respect to cathode.	330 max.	volts

Typical Operation with No.40 or No.47 Panel Lamp in

Accompanying Half-Wave Circuit with Capacitor-Input Filter:

AC Plate-Supply Volt. (RMS).	117	117	117	117	. .	volts
Filter-Input Capacitor	40	40	40	40	. .	μf
Min. Total Effective						
Plate-Supply Impedance	15	15	15	15	. .	ohms
Panel-Lamp Shunting Res.	-	300	150	100	. .	ohms
DC Output Current	60	70	80	90	. .	ma

← Indicates a change.

SEPT. 1, 1950

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HALF-WAVE VACUUM RECTIFIER

Typical Operation Without Panel Lamp in Conventional Half-Wave Circuit with Capacitor-Input Filter:

AC Plate-Supply Voltage (RMS).	117	volts
Filter-Input Capacitor	40	μ f
Min. Total Effective Plate-Supply Imped.	15	ohms
DC Output Current.	100	ma
DC Output Voltage at Input to Filter (Approx.):		
→ At half-load current (50 ma.)	135	volts
At full-load current (100 ma.)	120	volts
Voltage Regulation (Approx.):		
→ Half-load to full-load current	15	volts

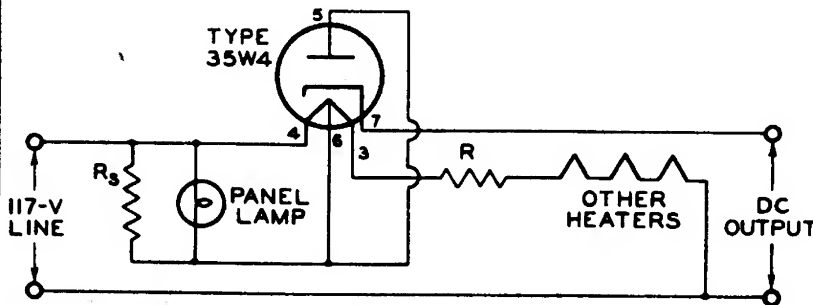
Maximum Circuit Values:

Panel-Lamp Shunting Resistor:*

For dc output current of	70 ma.	800 max.	ohms
	80 ma.	400 max.	ohms
	90 ma.	250 max.	ohms

*Required when dc output current is greater than 60 ma.

HALF-WAVE CIRCUIT with No.40 or No.47 Panel Lamp



DROP ACROSS R AND ALL HEATERS (WITH PANEL LAMP) SHOULD EQUAL 117 VOLTS AT 0.15 AMPERE. R_s = SHUNTING RESISTOR REQUIRED WHEN DC OUTPUT CURRENT EXCEEDS 60 MILLIAMPERES

92CS-6626

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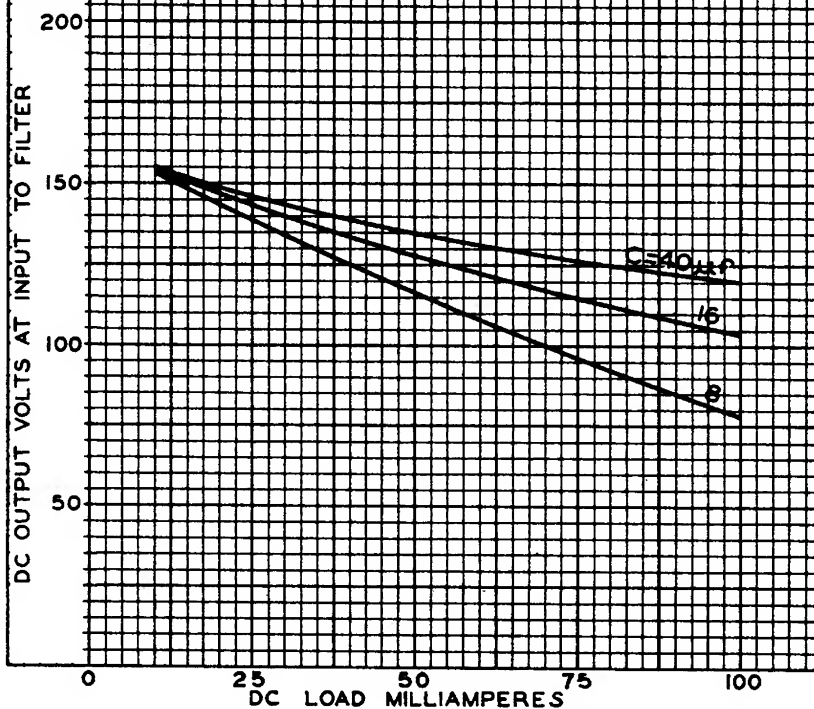
35W4 OPERATION CHARACTERISTICS HALF-WAVE RECTIFIER

$E_f = 35$ VOLTS BETWEEN PINS N^o 3 & N^o 4
(NO TAP CONNECTION)

PLATE VOLTS = 117 RMS

TOTAL EFFECTIVE PLATE-SUPPLY
IMPEDANCE = 15 OHMS

C = CAPACITOR INPUT TO FILTER



MAY 19, 1950

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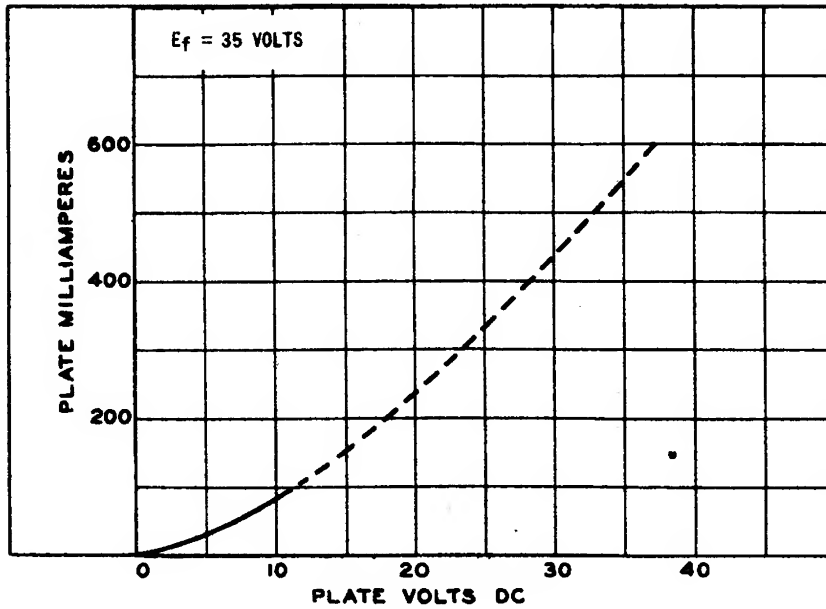
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AVERAGE PLATE CHARACTERISTIC



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